Psychology of Men & Masculinities

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Establishing Research Priorities for Investigating Male Suicide Risk and Recovery: A Modified Delphi Study With Lived-Experience Experts

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This study uses the Delphi expert consensus method to work with lived-experience experts and establish research priorities to advance our understanding of male suicide risk and recovery. Items for the Delphi were generated via findings from two recent quantitative and qualitative systematic reviews on male suicide, a comprehensive gray literature search, responses to a global survey on male suicide, and feedback from a panel of 10 international academic/clinical male suicide experts. A two-round Delphi study was conducted to gain consensus among 242 lived-experience experts representing 34 countries on 135 potential male suicide research questions. Panelists were asked to rate each item on a 5-point Likert scale from *should not be included* to *essential*. Consensus was defined as 80% of respondents scoring an item as "essential" or "important." After two Delphi rounds, consensus was reached on 87 items. The final questions were then grouped by the author team and expert academic/clinical panel into thematic clusters to create a 22-point agenda of research priorities. Like all methodologies, there are weaknesses to the Delphi method, not least that the experts employed in a Delphi study do not represent all experts on a topic. We note that many items that did not make it to the top of the research agenda related to minority experiences. All the questions prioritized in this agenda can be applied to different demographics. However, minority populations may require tailored Delphi's using expert panels drawn specifically from those groups. A final agenda of 22 research priorities was developed. Questions related to 10 thematic domains: (a) relationships with others, (b) relationship with self, (c) relationship with emotions, (d) mental health, (e) suicidal behaviors, (f) early-life experiences, (g) structural challenges, (h) cultural challenges, (i) at-risk groups, and (j) support and recovery. The three highest endorsed items related to loneliness and isolation (98%), feelings of failure (97%), and sources of stress and emotional pain (96%) for men who are suicidal.

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continued

Public Significance Statement
This DELPHI study is a collaboration with male suicide lived-experience experts. Together, we have prioritized an agenda for the next iteration of male suicide risk and recovery research. We hope this agenda can help global colleagues to strategically target resources to deepen our understanding of the male suicide crisis, to develop effective interventions, policies, and public understanding, and ultimately help more men at risk of suicide to access a dignified, meaningful, and purposeful life.

Keywords: male suicide, risk factors, research agenda, suicide prevention, Delphi

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In almost every country, men die by suicide at higher rates than women (Aubin et al., 2013; Canetto & Cleary, 2012). Rates between sexes vary with extreme disparities in Eastern European countries, where death rates are 6–7 times higher for men, to relative parity in countries like Bangladesh and Pakistan (Ritchie, 2015). Not only do men die from suicide at higher rates than women, but suicide is a leading cause of death for men in many countries. In the United Kingdom, suicide is the biggest cause of death for men under 50 (Saini et al., 2022). In the United States, suicide was the sixth leading cause of death for men in 2016 (From the CDC-Leading Causes of Death-Males all races and origins 2016, 2019). Despite these alarming statistics and scale of the issue, there has only been a modest amount of research into male suicide, specifically (Bilsker & White, 2011). There is urgent and significant work to do to explore and explain men's increased vulnerability to suicide in contemporary societies and generate appropriate recovery interventions (Player et al., 2015; Swami et al., 2008).

Various explanations for men's elevated suicide risk have been proposed. Women are potentially more likely to benefit from protective factors such as acknowledging their psychological distress, seeking help, and drawing on support from their interpersonal networks (Stack, 2000). Other male-specific risk factors identified in the literature include increased substance abuse (Sher, 2020), work/financial challenges (Samaritans, 2012), shame (Kõlves et al., 2013), and experiencing sexual abuse in childhood (Schrijvers et al., 2012). Specific subpopulations of men have also been identified as at particular risk, including male sexual minorities (Canetto & Cleary, 2012), men in the military (Canetto & Cleary, 2012), rural men (Tang et al., 2022), and middle-aged men (Samaritans, 2012).

It is important to note that while suicide death rates are higher in men, women are understood to attempt more, creating a gender paradox within suicidal behaviors (Canetto & Sakinofsky, 1998). This paradox suggests that both men and women may struggle with dysregulated psychological pain and a suicidal desire, but that this distress more often leads to suicide death if a person is male. According to Canetto and Sakinofsky (1998), this may partly be explained by gender variation in the means used during a suicide attempt. Men are more likely to use lethal methods, such as firearms, which are not only swift in terms of point of action to outcome but also have a higher likelihood of resulting in death compared to methods more commonly used by women, such as overdosing, which may take longer to cause death, allowing for a greater chance of medical intervention or a loss of intent and accessing help. Additionally, scholars suggest cultural scripts may present suicide as a fearless, forceful, and therefore "male" behavior, which may mean suicide is more culturally and cognitively accessible for men (Canetto & Sakinofsky, 1998; Schrijvers et al., 2012; Scourfield, 2005). Critically, this cultural script may also mean male suicide attempts are underreported. Men may perceive it as unmasculine to attempt and survive and therefore may not disclose previous attempts (Samaritans, 2012). While statistics around higher male death rates seem robust, Canetto and Sakinofsky (1998) urge caution around interpreting sex differences in suicide attempts as the data are more unreliable.

The Role of Gender in Male Suicide

Even though suicide statistics consistently indicate a clear sex difference—with higher suicide rates in men—the role of gender has rarely been problematized by suicidologists (Samaritans, 2012; Seager, 2019; Swami et al., 2008). Few researchers have asked, what is it about gendered ideas of masculinity, and their impact on male psychology, that may elevate male suicide risk? Instead, gender is often "treated as a static demographic variable" rather than "a culturally mediated social construction" (Bilsker & White, 2011, p. 529). This omission seems strange given that, as Seager (2019) says, "male gender is almost universally the biggest single risk factor for suicide since records began, it logically follows that suicide research if nothing else would be dominated by studies of male psychology and behavior." This has not been the case and as such there is a profound void in our understanding of how male psychology may impact male suicide risk and recovery (Bolster & Berzengi, 2019). A recent qualitative metasynthesis of male suicide suggests that gender may be critical in elevating male suicide risk: Bennett et al. (2023) synthesized findings from 78 studies and

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The authors have no conflicts of interest to disclose. All data generated or analyzed during this study are included in this article (and its Supplemental Material). There has been no prior dissemination of the ideas or data from this article.

Ethical approval for this project was granted by the University of Glasgow (ID 200200128). All participants gave informed consent to take part.

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highlighted the potential impact of cultural norms of masculinity on men who are suicidal. Feelings of failure related to not achieving markers of male success and masculine norms to suppress emotions and interpersonal needs were all cited as potentially elevating men's psychological pain and suicide risk. Critically, the authors suggest that feelings of failure and dysregulation of emotions and interpersonal connections may also drive female suicidal behaviors, but that men may be at an elevated risk because of masculine norms, which mean more men culturally inherit restrictive and potentially damaging ideas relating to these psychological domains. These cultural harms coupled with a preference for lethal methods may explain an aspect of male suicide. The quantitative literature on male suicide has also recently been synthesized (Richardson et al., 2021). Richardson et al. (2021) drew on 105 quantitative studies and identified 68 different risk factors, including substance abuse, having a diagnosis of depression, and relationship challenges such as being single or divorced.

Priorities for the Next Iteration of Research

Findings from the quantitative and qualitative systematic reviews bring together significant parts of the current male suicide evidence base, consolidating what we know, and highlighting future research priorities. This synthesis provides an opportunity to build on their results. Guided by their findings, we aimed to develop a research agenda to prioritize the next iteration of male suicide research. Research agendas created through independent, decentralized, and systematic means can help maximize effective and efficient resource allocation (Iqbal et al., 2021). This is especially relevant in the mental health domain, where funding is limited (Saini et al., 2022). Research prioritization work has increased over the last decade, with the Delphi methodology often employed (Iqbal et al., 2021). Delphi studies to develop research priorities have been used across different issues, including interpersonal violence (Mikton et al., 2017), assisted dying (Rodgers et al., 2016), and a suicide and self-harm research agenda for the Northwest of England (Saini et al., 2022). To our knowledge, there has been no work on developing a research agenda for male suicide.

This study aims to use the Delphi expert consensus method to establish research priorities to advance our understanding of male suicide risk and recovery. A robust research agenda can ensure the most critical issues are tackled systematically, support funding bids, help identify and promote necessary collaborations, and reduce duplication.

Method

Design

The design of this study was based on a modified Delphi methodology for mental health research as described in Jorm (2015). Delphi studies bring together experts on a subject and, via survey rounds, rate their agreements regarding various issues. This methodology is built on the principle that a diverse group of experts will generate better quality decisions than individuals or homogeneous samples (Saini et al., 2022). Items were generated via literature reviews and survey responses. Between January 2022 and April 2022, lived-experience experts rated two rounds of quantitative and qualitative survey questions (Figure 1).

Advisory Panel

For priority-setting exercises, an advisory group to help guide the overall process is recommended (Viergever et al., 2010). To that end, we recruited an advisory panel ($n = 10$) of global academic and clinical experts in male suicide to provide feedback on making sure the original and final research agenda items were robustly linked to academic literature and/or clinical practice. Panel inclusion was based on academic/clinical professionals who are leading experts in male suicide research known through the working groups' professional networks and/or experts who have authored papers on male suicide since 2000. We sought to recruit a spread of experts from different locations but were unable to secure many participants from the Global South, and this is a limitation of our study. The final panel comprised men ($n = 7$) and women ($n = 3$); clinical/academic experts ($n = 5$) and academic experts ($n = 5$); with representation from Australia ($n = 3$), Canada ($n = 1$), Ghana ($n = 1$), Ireland ($n = 1$), and the United Kingdom ($n = 4$).

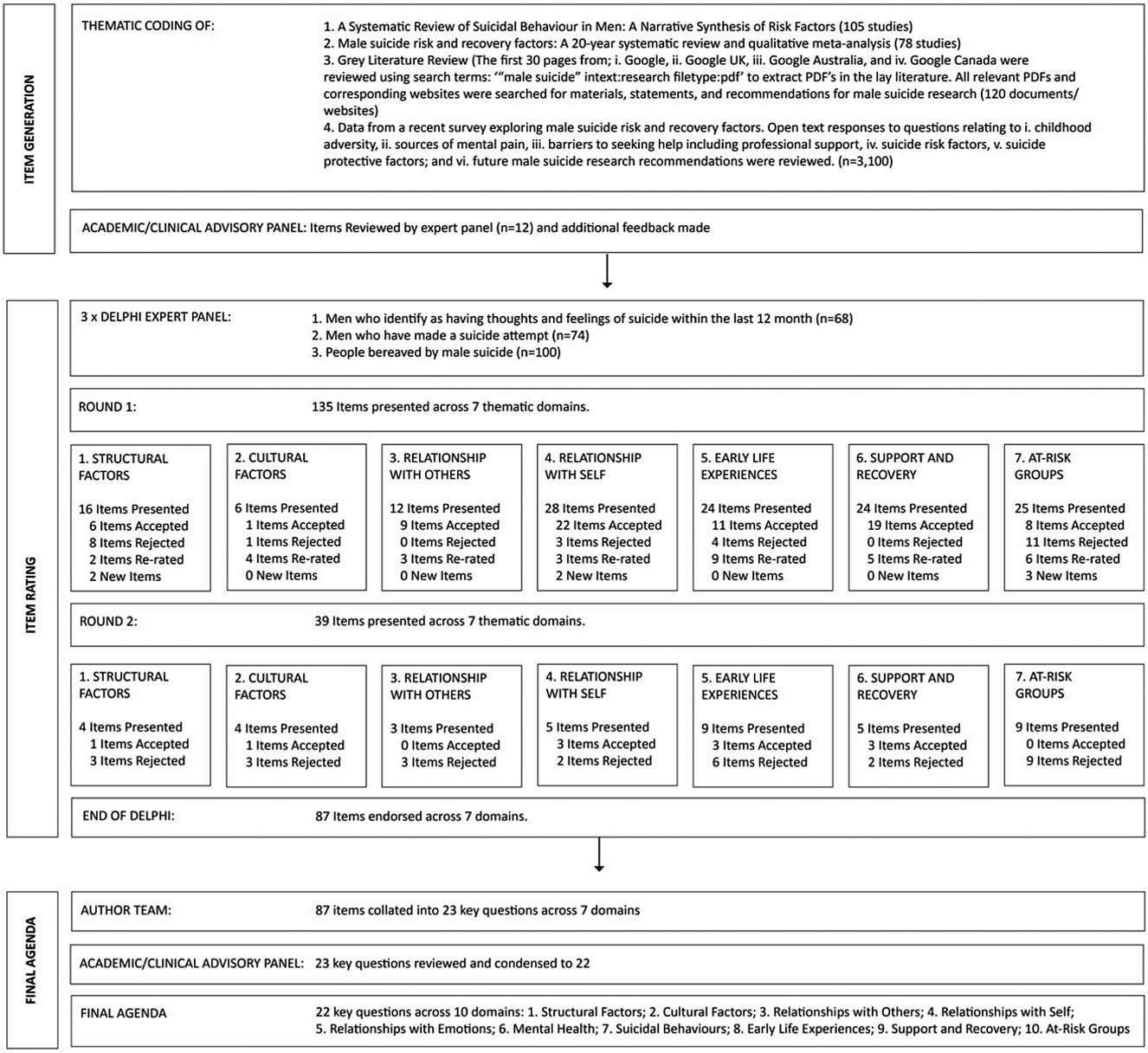
Item Generation

Viergever et al. (2010) state that literature reviews and surveys of stakeholders are valuable ways to collate initial data for research setting exercises. As such, our item generation was based on collating data from three different sources. (a) Data were sourced from the two recent systematic reviews into global male suicide risk and recovery (Bennett et al., 2023; Richardson et al., 2021). (b) Gray literature was excluded from the search terms of both these reviews, and as it can be an important resource with policy and research-relevant insights, a gray literature search was also conducted (Godin et al., 2015). The first 30 pages from (a) Google, (b) Google UK, (c) Google Australia, and (d) Google Canada were reviewed using the search terms "'male suicide' intext:research filetype:pdf" to extract PDFs in the lay literature. All relevant PDFs and corresponding websites were searched by the first author for materials, statements, and recommendations for male suicide research ($n = 120$). (c) Data from a recent survey exploring male suicide risk and recovery factors ($n = 3{,}100$) were reviewed by the first author for further insights. Open text responses to questions relating to (a) childhood adversity, (b) sources of mental pain, (c) barriers to seeking help including professional support, (d) suicide risk factors, (e) suicide protective factors, and (f) future male suicide research recommendations were reviewed. As per other Delphi studies, Braun and Clarke's (2006) thematic analysis was used by the first author to review all the data for common patterns and distill from it a set of potential research questions (Jorm, 2015). See Supplemental Materials for a breakdown of the coding, themes, and questions from the item generation sources. Potential research questions were developed by the first author (A1) and reviewed by Authors 2 (A2) and 3 (A3) in regular consensus meetings. Once a final draft of initial questions was completed, it was sent to the advisory panel for feedback. Feedback from the advisory panel was reviewed by A1, A2, and A3, resulting in 135 scoring items organized into seven thematic domains—see Figure 1 for breakdown.

Delphi Panel Recruitment

We recruited three groups of lived-experience experts as our Delphi panel. There is no standard size for a Delphi panel, though it

Figure 1
Delphi Consensus Process



is acknowledged that a higher number increases the reliability of findings (Jorm, 2015). As such, we aimed for a minimum sample of 50 per lived-experience group, ensuring relatively equal representation across all panels. Using a criterion sample, the three panels were: (a) Men who identify as having thoughts and feelings of suicide within the last 12 months (suicide ideation group); (b) men who have made a suicide attempt (suicide attempt group); and (c) people bereaved by male suicide (bereaved group). Participants were required to be aged 18 or over to be eligible.

The international panel was recruited through adverts and direct emails to national mental health/suicide prevention/suicide bereavement charities; grassroots depression/male support groups; men's mental health influencers/bloggers; sports clubs; businesses with high male staff representation; and social media posts/subthreads on Reddit and the research teams personal networks. Consideration was given to target groups and organizations that represent diverse and marginalized populations including different ethnic, faith, socioeconomic, and sexual minority groups. Adverts and email approaches were variations of the following message:

> Are you a man who has had suicidal thoughts & feelings or attempted suicide? Or have you been bereaved by male suicide? Could you help us co-design a research agenda for male suicide? Researchers at the University of Glasgow are looking to develop a research agenda of key priorities for understanding male suicide risk and recovery factors. We believe people with lived experience have vital expertise that can help shape suicide prevention work. We are looking for people willing to

share their experiences. Together we will produce a research agenda of priorities for male suicide.

From the original approach, participants were referred to a website where they could read in full about the purpose of the study. The website included an overview of the study, a copy of the participation information sheet, background about the research team, and signposting to support services. People with lived experience reviewed the website to ensure sensitivity of tone and clarity/accessibility of information. From the website, participants were able to self-select involvement in the study by submitting an online expression of interest form. The website received 262 visitors.

Delphi Process

A survey was built using online software (JISC). The survey took approximately 30 min to complete and included an "Informed Consent" tick box, demographic information capture, the 135 Delphi survey items, and concluded with signposting to relevant support organizations. People ($n = 5$) with lived experience known to the research team piloted the survey to review and test the accessibility of the survey and the language used (Hasson et al., 2000). This piloting identified that some items needed to be rephrased in more lay terms. Participants were sent an email with a link to the study and invited to rate each Delphi item based on a 5-point Likert-type scale (5 = *essential*; 4 = *important*; 3 = *don't know or depends*; 2 = *unimportant*; 1 = *should not be included*). At the end of each thematic set of questions was an open text box where participants were invited to make additional comments, suggestions, and qualifications. Participants who completed the first survey were asked to participate in the second and final round and rate new items generated from open text responses in Round 1 and rerate items from Round 1 where a consensus had not been met. Participants were provided with a PDF showing a breakdown and visual graphs of the Round 1 scoring (see Supplemental Materials "Round 1 Scoring"). Each survey round was open for 1 month, and participants were able to save their responses and finish their entries later. Up to three email reminders were sent out to relevant participants during each round. At the start of each survey, participants were asked, "Before starting the survey, please select the category most appropriate to your experience." Participants could then self-select from the following options:

- I am a man who has had thoughts/feelings of suicide over the last 12 months
- I am a man who has attempted suicide
- I have been bereaved by male suicide
- I am a man who has had thoughts/feelings of suicide over the last 12 months + I am a man who has attempted suicide
- I have been bereaved by male suicide + I am a man who has attempted suicide + I am a man who has had thoughts/feelings of suicide over the last 12 months
- I have been bereaved by male suicide + I am a man who has attempted suicide
- I have been bereaved by male suicide + I am a man who has had thoughts/feelings of suicide over the last 12 months

Originally, we only had the first three self-selection options available. However, during the piloting stage, feedback suggested that people can fall across multiple categories; that is, a man may have attempted suicide and be bereaved by male suicide. To represent participants' experiences accurately and sensitively, it was suggested that we create options for all permeations. This self-selected categorization was then used to organize responses for the data analysis.

Data Analysis

Participants were organized into reference categories of "suicide attempt group", "suicide ideation group," and "suicide bereaved group." This categorization was based on participants' self-identification, and participants were grouped in the following way:

- Suicide attempt group = Participants who identified as: I am a man who has attempted suicide OR I am a man who has had thoughts/feelings of suicide over the last 12 months + I am a man who has attempted suicide OR I have been bereaved by male suicide + I am a man who has attempted suicide OR I have been bereaved by male suicide + I am a man who has attempted suicide + I am a man who has had thoughts/feelings of suicide over the last 12 months
- Suicide ideation group = Participants who identified as: I am a man who has had thoughts/feelings of suicide over the last 12 months OR I have been bereaved by male suicide + I am a man who has had thoughts/feelings of suicide over the last 12 months
- Suicide bereaved group = Participants who identified as: I have been bereaved by male suicide

Once participants were categorized, we analyzed consensus levels across the groups. Building "consensus" is a significant tenet of the Delphi process; however, there is no standard definition of what constitutes consensus, and within the Delphi method, researchers are encouraged to establish their own definitions and justifications (Jorm, 2015). Different practitioners have set different thresholds ranging from 51% agreement to 80% (Hasson et al., 2000). Following standards common in other suicide-related Delphi studies (Lu et al., 2020), we agreed the following scoring criteria:

1. Items accepted = Items were automatically accepted onto the research agenda if they achieved ≥80% consensus by being rated as either 5 = *essential* or 4 = *important* by *all* three expert panels ("suicide attempt group," "suicide ideation group," and "suicide bereaved group").
2. Items rerated = Items were rerated in Round 2 if ≥80% of one expert panel endorsed it as 5 = e*ssential* or 4 = *important*, or if 70%–79.5% of two expert panels endorsed it as 5 = *essential* or 4 = i*mportant*.
3. Items rejected = Any items that did not meet the above criteria were rejected.

The quantitative survey data were analyzed using R Version 4.0.1. We ran descriptive statistics (i.e., frequencies) to obtain group

Table 1
Participant Demographic Profiles

Variable	Round 1 Total	Round 1 Panel 1 (attempt)	Round 1 Panel 2 (ideation)	Round 1 Panel 3 (bereaved)	Round 2 Total	Round 2 Panel 1 (attempt)	Round 2 Panel 2 (ideation)	Round 2 Panel 3 (bereaved)
Gender								
Female	38%	1%	3%	88%	41%	2%	4%	89%
Male	60%	97%	93%	11%	56%	96%	90%	9%
Nonbinary	0%	0%	1%	0%	1%	0%	2%	0%
Other	1%	1%	3%	0%	2%	2%	4%	0%
Age								
18–30	49%	67%	65%	26%	45%	64%	63%	20%
31–50	29%	21%	25%	38%	30%	22%	24%	38%
51+	21%	12%	10%	36%	25%	13%	12%	41%
Ethnicity								
Asian	7%	10%	10%	3%	8%	13%	12%	3%
Arab	1%	3%	1%	0%	1%	2%	2%	0%
Black	1%	1%	1%	1%	0%	0%	0%	0%
Multiple	5%	7%	4%	5%	5%	7%	4%	5%
White	81%	73%	79%	87%	81%	71%	80%	88%
Other	3%	4%	3%	2%	2%	2%	2%	1%
World bank income status								
High	89%	84%	87%	95%	88%	82%	84%	95%
Upper middle	4%	3%	6%	4%	4%	2%	6%	4%
Lower middle	6%	12%	7%	0%	7%	13%	10%	0%
Low	0%	1%	0%	0%	1%	2%	0%	0%
No. of countries represented	33	17	21	14	26	12	16	13
Relationship status								
Single	40%	52%	51%	25%	39%	51%	51%	23%
Married/relationship	45%	38%	38%	53%	46%	40%	37%	55%
Separated/divorced	7%	7%	6%	7%	7%	7%	8%	7%
Widowed	5%	1%	1%	11%	6%	0%	2%	12%
Other	1%	0%	1%	2%	1%	0%	0%	1%
Sexuality								
Straight	78%	74%	69%	86%	79%	69%	73%	88%
Gay	2%	0%	4%	3%	4%	0%	6%	4%
Bisexual	11%	18%	12%	5%	7%	22%	2%	1%
Not sure/other	8%	8%	15%	4%	10%	9%	18%	4%
Education								
I was not able to complete school	1%	1%	1%	1%	1%	2%	0%	1%
Completed school to Age 16	5%	4%	4%	6%	5%	2%	6%	5%
Completed school to Age 18	16%	25%	18%	8%	15%	22%	16%	9%
Degree	45%	47%	44%	46%	46%	47%	41%	49%
Postgraduate qualification	25%	15%	22%	34%	24%	13%	27%	30%
Other	7%	7%	10%	5%	8%	11%	10%	4%
Employment								
Employed full time	48%	42%	43%	56%	51%	47%	43%	59%
Employed part time	8%	7%	7%	9%	5%	2%	6%	7%
Self-employed	8%	10%	7%	8%	8%	11%	8%	7%
Stay at home parent	1%	0%	0%	2%	1%	0%	0%	1%
Student	12%	15%	19%	4%	10%	13%	18%	3%
Retired	5%	4%	1%	9%	6%	4%	2%	9%
Unemployed and seeking work	4%	5%	6%	1%	3%	4%	4%	1%
Unemployed due to disability/impairment	3%	8%	3%	0%	3%	9%	2%	0%
Disability								
Yes	21%	32%	28%	10%	21%	31%	22%	14%
No	74%	59%	72%	85%	75%	64%	78%	80%
Mental health diagnosis								
Yes	59%	81%	57%	44%	58%	82%	57%	43%
No	39%	16%	40%	55%	41%	18%	41%	55%
Previous history of suicidal ideation								
Yes	76%	92%	96%	51%	74%	87%	96%	51%
No	21%	7%	3%	45%	24%	11%	4%	45%
Previous history of suicide attempts								
Yes	34%	93%	9%	9%	32%	93%	8%	9%
No	62%	5%	87%	87%	66%	7%	88%	88%

(*table continues*)

Table 1 (*continued*)

Variable	Round 1 Total	Round 1 Panel 1 (attempt)	Round 1 Panel 2 (ideation)	Round 1 Panel 3 (bereaved)	Round 2 Total	Round 2 Panel 1 (attempt)	Round 2 Panel 2 (ideation)	Round 2 Panel 3 (bereaved)
Previous history of suicide bereavement								
Yes	59%	32%	31%	97%	61%	33%	31%	97%
No	39%	67%	65%	1%	36%	64%	65%	

Note. We note some minor anomalies in the completion of the demographic information. At the beginning of the survey, participants were asked to select from a drop-down menu whether they were a man who has had thoughts of suicide in the last 12 months, a man who has attempted suicide, or someone bereaved by male suicide. How participants identified determined what group they were assigned to for the analysis (ideation, attempt, or bereaved). In subsequent demographic questions, participants were also asked about gender identity and previous suicidal history. We note some minor discrepancies with the correlation of this information. For example, men in the "attempt" group, when later asked about previous suicide history, responded "no" to an attempt. These inconsistencies are found elsewhere in the literature (Deming et al., 2021) and may be to different phrasing of the questions or human error and were not considered large enough to undermine the analysis.

percentages for each survey item. Open text responses were collated and reviewed by A1, A2, and A3 for any novel suggestions not already covered by existing items or improved wording of original statements (Jorm, 2015). Scoring for the final round was based solely on items that scored ≥80% consensus across *all* three expert panels being accepted onto the research agenda and all other items being rejected. The final endorsed items were reviewed and approved by the author team and advisory panel.

Results

Participant Demographics

Table 1 shows the demographic characteristics of the three Delphi panels. In Round 1, there were 242 participants representing 34 countries, split into three groups, ideation ($n = 68$), attempt ($n = 74$), and bereaved ($n = 100$). Round 2 was completed by 168 people, ideation ($n = 47$), attempt ($n = 47$), and bereaved ($n = 74$). There was a 68% retention rate between the two rounds. The largest drop-off was in the attempt group with a 37% attrition, 31% in the ideation group, and 26% in the bereaved group. Readers should note this overrepresentation of bereaved populations when considering the findings.

Rounds 1 and 2

From the Round 1 scoring, 76/135 items met the ≥80% consensus threshold and were accepted onto the research agenda; 32 items needed to be rerated, and 27 items were rejected. After reviewing the open-text responses, seven new items were generated, including questions relating to education systems and male suicide risk and widowed men as a potential high-risk group. Round 2 consisted of 39 items, of which 11 met the ≥80% consensus threshold, resulting in an 87-item research agenda. Two items from the open text suggestions met the consensus—exploring trauma and male suicide risk (94%) and exploring male self-harm and suicide risk (83%). Of the original 135 Delphi items, 99% scored more than 50% consensus across the three panels. While not generalizable, it does suggest that recommendations in the extant academic and gray literature resonate to an extent with lived-experience experts. It also suggests that many rejected items still had a relatively high consensus and could be covered as a subset of investigation within accepted items. We encourage interested researchers to review the full scoring breakdown in the Supplemental Materials. The author team reviewed the 87 endorsed items and grouped them into further thematic clusters to make the agenda more user-friendly, resulting in 23 key questions. The advisory panel reviewed this document, and with their feedback, one question about male trauma was absorbed into a thematic cluster on male emotions, resulting in a final version of 22 priorities produced for dissemination organized into 10 thematic clusters—see Table 2, "Male Suicide Research Priorities."

Discussion

This modified Delphi study presents consensus among men who have attempted suicide, men with thoughts of suicide, and people bereaved by male suicide with regards to priorities for male suicide research. Here, we review some of the thematic priority questions and potential directions for future research.

Relationships With Others

All items in this thematic domain yielded a high consensus, with 66% being the lowest score. This suggests that interpersonal factors play a significant role in male suicide. The highest rated priority across the Delphi study was "investigating loneliness and isolation for men who are suicidal." The high endorsement of this question (98%) is consistent with contemporary theories of suicide that cite interpersonal challenges and thwarted belongingness as central to the emergence of suicidal pain (Leenaars, 1996; Van Orden et al., 2010). Feelings of loneliness and isolation have been strongly linked with male suicidal behaviors (Player et al., 2015; Strike et al., 2006). Isolation potentially relates to men who lack interpersonal connections and also to men who have significant connections but experience challenges creating meaningful intimacy within them (Bennett et al., 2023). We need to increase our understanding of men as relational beings and explore why some men's interpersonal needs are not being met. Central to this work will be investigating priority questions concerning "understanding meaningful connection and intimacy for men who are suicidal." We need to understand what men who are suicidal are seeking from interpersonal dynamics and potential issues in accessing this. Other questions voted as a priority include "investigating interpersonal challenges," specifically domestic abuse (88%), romantic breakups (85%), and interpersonal conflict (84%). There has been very little research into understanding

Table 2
Male Suicide Research Priorities

Theme type	Priority questions
Relationships with others	1. Investigating loneliness and isolation for men who are suicidal (98%)
	2. Investigating the role of meaningful interpersonal connection and intimacy in male suicide risk and recovery *Including:* Exploring what meaningful connection means to men who are suicidal (91%), how men build connections (86%), challenges men experience creating connections (87%), the best ways to support men to create/sustain meaningful connection (89%), and how meaningful connections can protect men from suicide (87%)
	3. Investigating interpersonal challenges and male suicide *Including:* Domestic abuse (physical, sexual, emotional, and/or psychological; 88%), romantic breakups (85%), and interpersonal conflict (84%)
Relationship with self	4. Investigating how men who are suicidal think and feel about themselves *Including:* Exploring feelings of failure in men who are suicidal (97%); exploring the role of self-esteem (92%), purpose and meaning (92%), control and agency (83%), and self-reliance (80%) in male suicide risk/recovery; and understanding the best ways to support men who are suicidal to repair harmful thoughts and feelings about themselves (94%)
Relationship with emotions	5. Investigating the emotional life and challenges of men who are suicidal *Including:* Exploring the main sources of stress and emotional pain for men who are suicidal (96%); understanding how men understand, manage, and express their emotions (94%), who men talk to about their emotional problems (94%), and the best way to support men to manage their emotions and emotional pain (92%); investigating trauma and male suicide risk (94%); and surviving sexual abuse/assault (81%)
Mental health	6. Understanding the mental health of men who are suicidal *Including:* Investigating the relationship between having a mental health condition and male suicide risk (90%) and exploring what language and messages are best to engage men who are suicidal around mental health issues (89%) and how men's mental health and suicide are represented in society and how these ideas impact men who are suicidal (86%)
Suicidal behaviors	7. Investigating men's suicidal behaviors and coping strategies *Including:* Exploring men's suicidal thoughts and feelings (92%), how men manage thoughts of suicide and what prevents them from acting on them (91%), what suicide means to men who are suicidal (86%), what triggers a shift from thinking about suicide to planning a suicide (90%), the thought patterns and emotional states of men when planning suicidal action (90%), the past- and future-thinking of men who are suicidal (90%); exploring the attitude of men who are suicidal toward seeking help (88%) and the experiences of men who are suicidal of seeking help (93%); and exploring the coping strategies men who are suicidal use (89%) and male self-harm and suicide risk (83%)
Early life experiences	8. Exploring the long-term impact of early-life challenges for men who are suicidal (89%)
	9. Understanding the mental health of young boys who are suicidal *Including:* Exploring how mental health problems—including suicidal thoughts, feelings, and attempts—develop in young men (92%); exploring how young men seek help (i.e., talking to teachers, peers, medical professionals, chat rooms) and cope with their problems (93%); and exploring the best ways to support young men who are suicidal (95%)
	10. Understanding early-life abuse/trauma and male suicide *Including:* Experiencing or witnessing psychological/emotional abuse (88%), physical/emotional neglect (88%), physical abuse (83%), sexual abuse (81%), death by suicide of a significant other (82%), death of a significant other (85%), early-life bullying (82%), family controlling behaviors, pressure and/or expectations (87%), mental health problems in the caregiving home (80%), and caregiver absence, abandonment, or estrangement (86%)
Structural factors	11. Investigating the role of work in male suicide risk and recovery *Including:* Exploring the role of work stress (88%) and unemployment (84%) in male suicide risk and understanding the importance of work as providing meaning, fulfillment, and identity for men who are suicidal (81%)
	12. Investigating financial challenges and male suicide risk *Including:* Exploring financial pressures and debt (90%), poverty (80%), insecure housing/homelessness (80%)
	13. Investigating the combined impact of multiple-structural challenges and male suicide risk, that is, being unemployed, having a disability, and living in insecure housing (87%)
Cultural factors	14. Investigating the role of masculine norms in male suicide risk and recovery *Including:* Exploring gender differences in how distress is expressed, understood, and responded to by people (86%) and exploring how men who are suicidal develop and form their ideas of masculinity (81%)
Support and recovery	15. Exploring what "recovery" means for men who are suicidal *Including:* Understanding how men cope after a suicide attempt (89%), what recovery means for men who have attempted suicide and men's reasons for living (88%)
	16. Exploring effective interventions *Including:* Exploring the most effective support for men in the 6 months following a suicide attempt (85%), and the most effective long-term support (92%); exploring the impact of different intervention

(*table continues*)

Table 2 (*continued*)

Theme type	Priority questions
	types (including universal, selected, and indicated interventions, and different intervention types such as talk therapy, medication, media campaigns; 93%); exploring how to best measure the outcome of interventions, that is, increased self-esteem and reduced suicide risk (84%); understanding how different services can work together better (i.e., how can the criminal justice system work with mental health care? 84%); and exploring effective interventions for men who cannot afford/access therapy (93%)
	17. Exploring the role of health care professionals in supporting men who are suicidal *Including:* Exploring men's relationship with health care professionals (87%) and the experiences of health service professionals of working with men who are suicidal (83%); exploring the experience of men who are suicidal of seeking professional support (93%) and what professional support men who are suicidal want to receive (84%); understanding what training health care professionals need to better identify and engage at-risk men (91%); exploring differences in how men and women present suicide risk and the best gender-sensitive screening tools for health services professionals (84%); and exploring how academic researchers and health care professionals can work together to incorporate research findings into services (84%)
	18. Exploring the role of significant others in supporting men who are suicidal *Including:* Exploring the experiences of men who are suicidal of seeking support from significant others (91%) and the experiences of significant others when supporting men who are suicidal (86%)
	19. Exploring community interventions *Including:* Exploring how to create communities that support men who are suicidal better (84%); exploring the experiences of men who are suicidal of accessing support in their community (83%) and the experiences of community members who support men who are suicidal (85%); and exploring effective community members who can spot and engage at-risk men (80%) and effective training for community members to support men who are suicidal (80%)
At-risk groups	20. Exploring men experiencing life transitions: *Including:* Young boys—13–18 (82%), male university students (84%), middle-aged men (87%)
	21. Exploring men experiencing structural challenges: *Including:* Men who are unemployed (81%), men who are homeless (81%)
	22. Exploring men experiencing emotional challenges: *Including:* Male survivors of abuse (90%), men bereaved by suicide (83%), men with addiction problems (83%)

domestic abuse and male suicide risk. Future work needs to investigate both men's roles and experiences as perpetrators of violence (Dewar et al., 2022) and men as victims (Powney & Graham-Kevan, 2019). By contrast, the link between male suicide and relationship breakups is well established (Samaritans, 2012; Swami et al., 2008; Whitley, 2021). We now need to deepen our understanding of why interpersonal challenges, conflict, and breakups can be so painful for some men and how men can be supported to navigate these difficulties better. A question that just missed the threshold for acceptance but may be relevant to this cluster is parental alienation (79%).

Relationship With Self

The second most endorsed priority was exploring feelings of failure in men who are suicidal (97%). We grouped this question with other related priorities, including self-esteem (92%), purpose, and meaning (92%), to investigate how men who are suicidal think and feel about themselves and their lives. In the qualitative metasynthesis, 76% of studies suggested feelings of failure were linked with increased psychological pain and suicide risk in men (Bennett et al., 2023). We need to understand why certain men are so vulnerable to overwhelming feelings of personal failure and loss of meaning.

Relationship With Emotions

The third highest endorsed question was examining stress and emotional pain for men who are suicidal (96%). We grouped this with other questions such as how men understand, manage, and express their emotions (94%). Male emotional suppression has been strongly linked to suicidal behaviors (Bennett et al., 2023; Cleary, 2019; Meissner & Bantjes, 2017; Tryggvadottir et al., 2019). Unbearable psychological pain is foundational to many theories of suicide (Shneidman, 1998; Soper, 2019). Our ability to regulate and manage our emotions is a core process by which we can purposefully discharge and direct psychological pain. Deepening our understanding of men as emotional beings could help us understand why some men are potentially thwarted in their efforts to do so effectively.

Mental Health

It is commonly held that 90% of people who die by suicide have a mental health disorder (Cavanagh et al., 2003). However, the reliability of this statistic—obtained primarily through psychological autopsies—has been questioned, and it is reported that men who die by suicide are less likely to have a mental health diagnosis (Fowler et al., 2022). Scholars suggest some mental health conditions that are often linked to suicide, such as anxiety and depression, may be undisclosed and/or undetected in men (Fisher et al., 2022; Kõlves et al., 2013). As such, we need to investigate the relationship between having a mental health condition and male suicide risk (90%). There is also evidence to suggest some men reject a pathologizing framing of their suicidal pain and that the biomedical model may deter professional help-seeking (River, 2018). Instead, some men see their distress as a response to relational or structural challenges

(Hoy, 2012). We need to understand how men's mental health and suicide are represented in society, how these ideas impact upon men who are suicidal (86%), and what language and messages would be most effective for engaging men (89%). These questions are particularly urgent in countries and communities where mental health stigma and criminalizing laws toward suicide are prevalent.

Suicidal Behaviors

This cluster of priorities relates to "investigating men's suicidal behaviors and coping strategies." Endorsed items such as exploring what triggers a shift from thinking about suicide to planning a suicide (90%), could help us to understand potential psychological shifts in men as they transition from suicidal ideation to planning suicide to attempting suicide. This knowledge could inform the development of effective interventions to help men manage different stages of a suicidal crisis. Understanding men's coping behaviors was also a priority (89%). Evidence suggests some men may seek to anesthetize their pain through alcohol, drugs, gambling, and self-harm, which can compound problems over the long term (Andoh-Arthur et al., 2022; Meissner & Bantjes, 2017). As well as investigating potentially maladaptive coping behaviors, we also need to understand adaptive coping strategies that men adopt, such as social connection, sports, and faith (Hoy, 2012).

Early Life Challenges

Several systematic reviews and meta-analyses have established the link between childhood challenges and suicidal behaviors (Angelakis et al., 2019; Liu et al., 2017). However, this work often uses female-dominated samples, and we need to better understand how childhood difficulties impact young boys and men specifically (Lemaigre & Taylor, 2019). Martin et al.'s (2004) study suggests that boy survivors of sexual abuse may be at higher risk of suicidal behaviors than girls. Prioritized questions include understanding the impact of experiencing and/or witnessing psychological/emotional abuse (88%) and early-life bullying (82%). Understanding the long-term impact of early-life challenges was also endorsed as a priority (89%) as well as understanding how mental health challenges and suicidal behaviors develop in young boys (92%). Research suggests that early-life interventions such as school awareness programs can help reduce suicide attempts (Zalsman et al., 2016). Strengthening our understanding of how suicidal behaviors evolve and manifest in young men can help to strengthen the utility of early-life interventions and potentially prevent psychological pain from accumulating over the life course, thereby reducing suicide risk. In this work, it may be important to consider the interaction of childhood challenges and male socialization. Men who experience trauma in childhood may experience a double jeopardy where they are exposed to psychological pain in childhood and then socialized to suppress that pain (Bennett et al., 2023). A 2013 study found that men who were abused as children and expressed high masculine norm conformity were at higher suicide risk (Easton et al., 2013).

Structural Factors

Three clusters of questions examining male suicide and structural factors received priority. These questions focused on financial and work challenges, including unemployment (84%), financial pressures/debt (90%), insecure housing/homelessness (80%), and the importance of work as providing fulfillment, meaning, and identity to men (81%). It is interesting to note the priority given to structural questions pertaining to men's role in economic and financial contexts and the potential importance of work and provision as continued sites of masculine meaning and identity. Previous research has shown that unemployment and job loss are more prevalent in male compared to female suicides (Whitley, 2021). When exploring this work is important to consider the different work and financial pressures different demographics of men experience. Each man will have been afforded by his biology, environment and society, different education opportunities, aspirations, and qualifications, which will interact with other potential structural barriers such as race, migration status, and disability to potentially elevate suicide risk. A question that just missed the threshold for acceptance but may be relevant is exploring education systems and male suicide risk (79%).

Cultural Factors

Two questions about cultural factors were given priority in the research agenda. The first examines gender differences in how male distress is understood, expressed, and responded to by people (86%). In terms of expression, evidence suggests norms of emotional suppression mean some men may deny their pain—both to themselves and to others (Meissner & Bantjes, 2017; River, 2018). Other men can communicate distress in flat and/or pragmatic terms, which can be perceived as lacking in emotional urgency and so misread (Kunde et al., 2018; Strike et al., 2006). Thoughts of suicide can be expressed as part of light-hearted banter or after a lot of alcohol (Owen et al., 2012). Future research should examine how masculine norms contribute to how men understand, frame, and express their psychological pain. In understanding male distress presentations, we also need to investigate how it is responded to. Scholars have suggested that societies may be more culturally attuned and receptive to female presentations of despair (Coleman et al., 2011). γ bias, a term operationalized by Seager and Barry (2019), is the hypothesis that our empathy is partly conditioned by cultural norms that may mean we are more sensitive to male behaviors that cause harm than those that harm men, as well as more primed to perceive men as occupying positions of power/privilege than as being disadvantaged. These potential biases may impact upon how male distress is responded to.

Understanding how men form their ideas of masculinity was also considered a priority (81%). Given consistently higher suicide rates in men, we urgently need to explore the role of gender, masculine norms, and male socialization in potentially elevating male suicide risk. Previous research has shown that men who strongly endorse traditional masculine values are at higher suicide risk (Coleman, 2015; Coleman et al., 2011), particularly norms relating to self-reliance (Pirkis et al., 2017). Masculine norms were also central to findings in the male suicide qualitative metasynthesis (Bennett et al., 2023). Future research can help us build a more nuanced understanding of how men who are suicidal develop their understandings of male behavior, distinguishing between the cultural norms present in their area (ideologies) and their own beliefs. For example, a man may perceive cultural norms for men to

emotionally suppress but reject this practice in his own behavior. We need to examine the diversity of behavior in individual men, among communities of men, and across different cultures and demographics of men (Ridge, 2019; Seidler et al., 2018). At the same time, we need to continue to explore why male sex/gender as a broader, pervasive collective identity leaves more men than women at risk of suicide (Seager & Barry, 2019).

Support and Recovery

We also urgently need to determine which interventions could help men manage suicidal crises and access a more meaningful life. There has been limited research into what interventions work best for men (Bilsker & White, 2011). While men have traditionally been perceived as poor help seekers, growing evidence suggests men are seeking help but have negative experiences when they do so (River, 2018; Tryggvadottir et al., 2019). We need to investigate key questions such as what sort of support men want to receive (84%), and men's experiences of accessing professional support (93%).

Men are more likely than women to die on a first attempt (Jordan & McNiel, 2020) and not be in contact with mental health services (Tang et al., 2022). Given these factors, strengthening support for men through informal, nonclinical community spaces as well as through friends and family may also be important (Schaffer et al., 2016). Significant others are often on the frontline of a loved one's suicidal crisis and are frequently an important resource for recovery journeys. However, there has been very little research to understand their experiences (Dransart & Guerry, 2017), and this was endorsed as a priority in our agenda. Similarly, evidence suggests that some men may prefer accessing support in informal community-based settings, including pubs, workplaces, or sports spaces (Kõlves et al., 2013; Struszczyk et al., 2019). Again, there is a lack of research into this area, and priority was given to understanding community interventions, including how to create communities that can support men who are suicidal better (84%).

The complexity of factors that contribute to suicidal pain makes the development of effective interventions extremely challenging. Indeed, the biomedical framing of suicide has been criticized for narrowing the causes of suicidal pain to a medical issue residing in the biology of the individual. This conceptualization can limit the scope of interventions by failing to problematize environmental, cultural, and structural conditions that may be causing profound stress (Button, 2016; Hoy, 2012). We encourage researchers to explore integrated interventions that take a holistic view of men's psychological pain, and a priority question that could help address this is understanding how different professional services can work together (84%). The help for people with money, employment or housing problems intervention project, for example, provides men at risk of suicide with emotional support alongside financial, work, and housing support and has shown potential utility (Farr et al., 2022). Interventions to tackle social problems such as loneliness, unemployment, or homelessness; raising population levels of emotional competency and interpersonal skills; and media campaigns that challenge emotionally restrictive norms of masculinity could all have potential suicide prevention value. Of course, the breadth of what could be considered suicide prevention then becomes hard to boundary, and evidencing the direct impact of interventions on suicide reduction may be challenging. Nevertheless, a more expansive lens on prevention may herald better outcomes and situate suicide as a phenomenon that has roots in many facets of life beyond the individual within which the suicidal pain resides (Bryan, 2022).

Interventions may also need to be tracked over the long term. While a man may be prevented from taking his life at the time of an intervention, he could go on to do so later. We need to take a long-term view of recovery to truly understand if suicide prevention is working and whether men require different support at different times. Intrinsic to this work will be understanding what recovery means for men who have attempted suicide and men's reasons for living, a question endorsed by 88% of participants, as well as how to best measure the outcome of interventions (84%). Developing a shared understanding of what recovery means, grounded in lived experience, and effective outcome metrics, tracked over the long term, could help define unifying goals for what suicide prevention work is seeking to do and whether it is working.

Limitations

Like all methodologies, there are weaknesses to the Delphi method, not least that the experts employed do not represent all experts on a topic. However, as Jorm (2015) notes, many processes that underpin scholarship are built on a similar ethos of privileging a select group of experts' consensus on a topic. Processes such as peer and panel reviews are all based on group decision making, and these groups will not be reflective of every expert with a relevant contribution. However, it is important to acknowledge that the priorities in this agenda are not exhaustive. In particular, we note that many items that did not make it to the top of the research agenda related to minority experiences, and we hope that the research community will take this into consideration when deciding where to put resources. For example, the suicide rates for the trans population and sexual minority men are higher than cisgendered and heterosexual populations and, therefore, potentially of urgent priority (Hottes et al., 2016). Similarly, there has been very little research to understand the risk of suicide in men with disabilities. All the questions prioritized in this agenda can be applied to different demographics. However, minority populations may require tailored Delphi's using expert panels drawn specifically from those groups.

Similarly, the author team, advisory panel, and lived-experience experts come primarily from high-income western contexts, and our results may not be relevant to other locations. We have made all the original items available in the Supplemental Materials and encourage researchers in other locations to develop context-specific priorities. The research team was also primarily psychologists; therefore, we brought our psychological biases to the Delphi process. Many questions from other disciplines relevant to male suicide, such as those from social anthropology, neurology, or biology, are omitted and require a different set of experts to prioritize. We welcome future considerations around how to expand and incorporate these contributions.

Conclusion

Male suicide is an urgent, underresearched, and underfunded public health crisis. This modified Delphi study is the first to develop a prioritized research agenda for male suicide. This agenda highlights potential suicide risk and recovery factors related to relationships with others, relationship with self and emotions,

mental health, suicidal behaviors, early-life experiences, structural and cultural challenges, at-risk groups, and support and recovery interventions. The three highest endorsed questions in the Delphi related to loneliness and isolation (98%), feelings of failure (97%), and sources of stress and emotional pain for men who are suicidal (96%). These questions particularly accord with findings from the qualitative metasynthesis on male suicide, which highlighted the cultural suppression of men's interpersonal needs and emotions and failing to meet ideals of male success as potentially associated with increased suicide risk (Bennett et al., 2023). This evidence, taken together, suggests that, as a first priority, we urgently need to explore how men's need for connection, valued and purposeful selfhoods, and effective emotional regulation are being met, or not, in contemporary societies.

Understanding the influence of a particular risk or recovery factor often requires focused work investigating that component. As such, many of the priorities in this agenda are singular in focus, for example, unemployment and suicide risk. However, suicide is not caused by a single factor but by the interaction of many issues, which create temporal and dynamic fluctuations in the level of risk each man faces at different moments (Whitley, 2021; Zortea et al., 2020). A man who is suicidal cannot be understood in isolation, independent of the biological, environmental, cultural, political, and structural conditions of his life or the evolutionary context that has borne and sustained human existence (Button, 2016; Sloan Wilson, 2019). These priorities need to be understood and explored within the context of interacting factors, and some questions might work well in combination. Multimethods and multidisciplinary collaborations are required to thoroughly interrogate the questions proposed in this agenda (Chandler, 2020; Hjelmeland & Knizek, 2017). People with lived experience, psychologists, epidemiologists, sociologists, anthropologists, neuroscientists, immunologists, geneticists, political scientists, philosophers, and many others are central to addressing this research agenda. Suicide incorporates multiple aspects of human behavior, such as emotional regulation and the neurobiology of interpersonal connections. Nonsuicide specialists who are experts in these adjacent fields may be important partners for future collaboration.

This Delphi process has yielded an ambitious research agenda that we believe will facilitate progress to protect against this human tragedy. Delivering on these priorities will require significant political will, financial support, and multimethod, multidiscipline collaborations. We hope this agenda can help global colleagues to strategically target resources to deepen our understanding of the male suicide crisis, to develop effective interventions, policies, and public understanding, and ultimately help more men who are suicidal to access a dignified, meaningful, and purposeful life.

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